United States Patent [19]

Moore

[11] **Patent Number: 4,587,378**

[45] **Date of Patent: May 6, 1986**

[54] **TWO-LAYER TOUCH TABLET**

[75] Inventor: **Cecil A. Moore**, San Jose, Calif.

[73] Assignee: **Koala Technologies Corporation**, San Jose, Calif.

[21] Appl. No.: **636,059**

[22] Filed: **Jul. 30, 1984**

[51] **Int. Cl.**[4] **G08C 21/00**

[52] **U.S. Cl.** **178/18**

[58] **Field of Search** ..... 178/18, 19, 20; 340/712, 365 UL, 365 C

[56] **References Cited**

U.S. PATENT DOCUMENTS

3,207,905 9/1965 Bray ..... 340/712 X

4,484,026 11/1984 Thornburg 178/18

Primary Examiner—Stafford D. Schreyer

Attorney, Agent, or Firm—Thomas S. MacDonald; Alan H. MacPherson; Steven F. Caserza

[57] **ABSTRACT**

A touch tablet (**10**) for determination of x-axis and y-axis coordinates of point touched includes a two-layer operating structure, each layer (**11,21**) containing a resistive bar (**12,22**) at an edge portion of an insulative substrate and a series of interdigitated conductive pathways (**14,15**) extending toward and away from the bar and an opposed conductive strip (**13,33,43**) on at least one of the layers. The bars and conductive pathways are orthogonally with respect to one another on each layer and further are orthogonal on one layer with respect to those bars and pathways on the other layer. A potential typically of 5 V is impressed on either one end of each of the resistive bars or on the interdigitated pathways.

The two layers (**11,21** or **31,41**) are normally spaced from each other by insulative dots (**6**) on one facing surface or by an embossed peripheral ridge (**56**) on the top surface. Pressing of a point or small area of the top layer by a user's finger or hand-operated stylus makes a contact between the respective conductive pathways and simultaneously outputs an x-axis and y-axis coordinate voltage variously dependent on the point pressed and the resistance of the linear length of the bar from the point of connection of the voltage to the bar and the intersection of contacted orthogonal pathways. The resultant **0–5** V output may be picked-off in either a potentiometric or rheostatic mode and conducted to a CRT or computer port for processing and display.

7 Claims, 6 Drawing Figures